The
International Rescue Committee

Construction Related Training Program for Afghanistan (CRTA)

1987 - 1995



Closing Report

July, 1995



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This report outlines major activities of the Construction Related Training Program for Afghanistan (CRTA) operated by the International Rescue Committee (IRC) from 1987, when it was first established, to 1995, when the program was moved, under the auspices of a new donor, to Herat, an important western provincial capital city of Afghanistan, to be associated with the university in that city.

Introduction



The reconstruction needs of Afghanistan are overwhelming. The rehabilitation and replacement of roads, bridges, irrigation systems, airports, public buildings, shops, and homes all require the services of trained architects, engineers, and construction personnel. This was apparent even in 1987 when the International Rescue Committee invited a group of exiled engineering professors from the Faculty of Engineering in Kabul University to start an institution in Peshawar to train engineers and construction professionals for the post-war reconstruction of the country.

The Faculty, closely associated with engineering schools in America, such as Nebraska, Cincinnati, Cornell and Stevens, was closed by the Communist Government in Kabul in 1984. Its leading staff members soon afterwards fled to Peshawar. This distinguished group, which launched IRC's Construction Related Training Program for Afghanistan (CRTA) in 1987, included Drs. Nasir, Surgul, Hassani and Professors Bahrami, Sakhi, Faqiri and Hamidi.

CRTA had two main objectives. First, to continue educating engineering and construction personnel which could be used in the large task of reconstructing the country, and secondly, to preserve the academic staff, curriculum and traditions of the Faculty of Engineering until such time as they could be returned to Afghanistan.

During the nine years that CRTA operated under the auspices of IRC, nearly 100 young men graduated from the university-level civil engineering program while almost 300 completed courses of study for supervisory positions in construction projects. Many of these students are now placed in organizations busy with construction projects in peaceful areas of Afghanistan.

In 1993 and 1994, because of a decline in international funds available for humanitarian assistance to

Afghanistan, long-time donors to CRTA were forced to reduce their previously generous support. This led IRC to seek new sources of funding for CRTA.

The veteran Afghan NGO, Coordination of Humanitarian Assistance (CHA) in Herat, with European Union backing, in early 1995 took over the management of CRTA with the long term objective of establishing it as the Faculty of Engineering in Herat University. As the last engineering students were finishing their course of study in Peshawar, new students were entering the program in Herat.

CRTA in Peshawar graduated its final class of 20 engineering students and closed its doors on June 29, 1995. Much of the remaining staff have now transferred to Herat. CRTA's last director, Professor Hamidi, continues his relationship with the program as a senior consultant to CHA in Herat.

The CRTA program in Peshawar was comprised of the following three components:

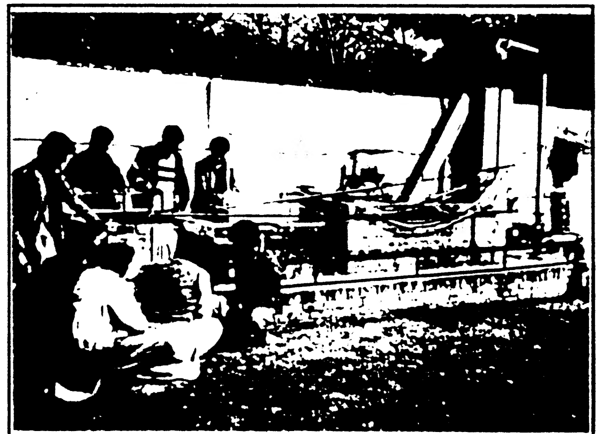
I. Construction Engineering Program
II. Construction Supervision Program
  1. Construction Supervisor Program (Nine Months)
  2. Assistant Engineer Program (18 Months)
III. Refresher and Professional Development Program

I. The Construction Engineering Program

The Construction Engineering Program offered a 36-month civil engineering course with a curriculum similar to that offered at the Kabul University Faculty of Engineering before the war. To address any academic weaknesses the students might have when they entered the course, the program offerred a remedial course in English, mathematics, and physics. The students had to complete these pre-engineering courses before they enrolled officially. During the summers, the students participated in a required field training program which enabled them to apply the theory they learned during the academic year. Upon completion of the program, students were qualified to provide the engineering expertise to construct roads, canals, bridges, buildings, and other facilities. The curriculum is shown at the conclusion of this report.

II. The Construction Supervision Program

Initiated in 1989, the Construction Supervision Program offered two sequential nine-month courses of study: the Construction Supervisor program and the Assistant Engineer program. Both programs included two three-and-a-half month theory sessions with a two-month practical session in between. In the practical session, students were placed with organizations carrying out construction projects in Afghanistan and in refugee camps in Pakistan. The courses were taught in Dari and Pushto by faculty composed mostly of graduates of the Kabul University Faculty of Engineering.



1) Construction Supervisor Program

This first nine-month course equipped graduates

with the skills needed to work as construction foremen. They could go on to supervise crews of construction workers or manage small rural construction projects. Traditionally, many trained Afghan engineers and technicians were reluctant to work in isolated areas far from their home villages or towns because of the physical and social hardships of rural life. To address this problem, IRC recruited students in the nine-month Construction Supervisor courses by a quota system which assured that graduates originate from widely dispersed areas and intend to return to their home areas.

2) Assistant Engineer Program

This course was open to students who completed the nine-month Construction Supervisor course and then passed a further test of achievement and aptitude. The program provided participants nine more months of training in construction aspects of engineering projects. Graduates of the Assistant Engineer Program were equipped with the skills needed to manage small to medium size engineering projects and to serve as engineering technicians or assistant engineers.

III. The Refresher and Professional Development Program

The Refresher and Professional Development Program offered graduate engineers an opportunity to expand and update their technical knowledge. It was designed to keep Afghan engineers informed of recent developments in their fields by providing short-term technical refresher courses in various areas of civil engineering. The courses offered included: design of reinforced concrete, design and construction of roads and bridges, water supply and sanitary construction engineering management.

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Construction Related Training Program for Afghanistan Graduates: 1989 - 1995	
Courses of Study	Total Graduates
Construction Engineering Graduates	89
Construction Supervisor Course Graduates	204
Assitant Engineer Course Graduates	93

Construction Related Training Program for Afghanistan
Curriculum

CONSTRUCTION ENGINEERING

• 1st Semester

Islamic Studies
Math I
Chemistry
Drawing I
Introduction to Engineering
Computer
English

• 2nd Semester

Islamic Studies
Math II
Physics
Drawing II
Statics
Surveying I
English

• 3rd Semester

Islamic Studies
Math III
Physics II
Strenght of Materials
Surveying II
English

• 4th Semester

Islamic Studies
Math IV
Physics III
Concrete I
Fluid Mechanics
English

• 5th Semester

Islamic Studies
Geology
Structural Analysis
Concrete II
Technical Communication
Electrical Engineering I
Hydraulics

• 6th Semester

Practical Training:
Between 4th and 5th Semesters
(Nine Weeks)
Practical Training:
Between 7th and 8th Semesters
(Nine Weeks)

• 7th Semester

Islamic Studies
Hydrology
Soil Mechanics
Engineering Management
Water Supply
Dynamics

• 8th Semester

Islamic Studies
Sanitation Engineering
Project Design
Foundations
Engineering - Highway
Engineering - Economy

CONSTRUCTION SUPERVISOR

• 1st Semester

Islamic Studies
English I
Mathematics
Drawing and Technical Sketching
Surveying I
Construction Materials
Rural Water Supply and Sanitation

• 2nd Semester

Islamic Studies
English II
Construction Operation Safety & Machineries
Quantities and Cost Estimation I
Working and Construction Drawing
Plain Concrete & Masonry Construction
Surveying II

ASSISTANT ENGINEER PROGRAM

• 3rd Semester

Islamic Studies
English and Technical Communication
Architecture Drawing
Construction of Concrete Structures
Quantities & Cost Estimation II
Layout Survey, Road Construction and Drainage

• 4th Semester

Islamic Studies
Technical English and Seminar
Electrical Wiring
Project Management
Construction of Concrete Structures II
Irrigation

The following organizations employed graduates of the CRTA program

- Afghan Construction and Logistic Unit (ACLU)
- Afghanistan Development Assistance (ADA)
- Afghan Development Organization (ADO)
- Afghanistan Reconstruction Consultants (ARCON)
- Agency for Farming Support (AFS)
- Austrian Relief Committee (ARC)
- Afghan Rehabilitation Organization (ARO)
- Afghan Relief and Rehabilitation (ARR)
- Afghanistan Reconstruction Service (ARS)
- Afghan Support Committee (ASC)
- Bakhter Development Agency (BDA)
- CARE International - Afghanistan Program
- Consultant Bureau for Reconstruction (CBR)
- Cooperation Center for Afghanistan (CCA)
- Coordination of Afghan Relief (COAR)
- Danish Committee for Aid to Afghan Refugees
- Development Alternatives Incorporated (DAI)
- Emergency Relief and Service for Afghans (ERSA)
- Engineering Services for Afghan Rehabilitation
- German Afghan Foundation (GAF)
- Ghazni Reconstruction Association (GRA)
- German Agency for Technical Cooperation (GTZ)
- IRC's Construction Related Training program for Afghanistan (CRTA)
- IRC's Self Reliance Program (SRP)
- IRC's Rehabilitation Program for Afghanistan (RPA)
- IRC's English Language Program (ELP)
- Jehad Consultant Engineers (JCE)
- Laghman Reconstruction Organization (LRO)
- Mine Technical Consultants (MTC)
- Norwegian Afghanistan Committee (NAC)
- Norwegian Refugee Council (NRC)
- Paktia Reconstruction Program (PRP)
- Partners for Social Development (PSD)
- Reconstruction Authority for Afghanistan (RAFA)
- Reconstruction and Rural Development for Afghanistan (RRDA)
- Rural Development of Wardak (RDW)
- Swedish Committee for Afghanistan (SCA)
- Short Term Assistance Rehabilitation Team (START)
- South West Farmer Assistance Organization
- GTZ - Technical Training Program
- United Nations Development Program (UNDP)
- University of Nebraska at Omaha (UNO)
- Volunteers in Technical Assistance (VITA)

